Ching-Yu (Jessie) Wang

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4+-year research experience in HEOR, economic modeling, and observational studies using RWD including claims databases with industry research project experience in oncology

Education

Jun. 2019 – Dec. 2021 (expected) **University of Florida (UF)**, Gainesville, Florida, USA
Doctor of Philosophy, Pharmaceutical Outcomes and Policy; GPA 3.96/4.00

Aug. 2017 – May. 2019 **University of Florida (UF)**, Gainesville, Florida, USA
Master degree of science, Pharmaceutical Outcomes and Policy; GPA 4.00/4.00

Sep. 2012 – Jun. 2016 **Taipei Medical University (TMU)**, Taipei , Taiwan
Bachelor degree of science, Pharmacy; GPA 3.79/4.00

Work Experience

Jan. 2021– Dec. 2021 (expected) **Pharmacoepidemiology research fellow,** Center for Observational and Real-world Evidence (CORE), Merck & Co., Pennsylvania, USA (ongoing)

- Project title: Cancer patient cohort comparison among clinico-genomic databases and other commonly used oncology research databases
- Role: 1) Developed research protocol; 2) Analyze and compare colorectal cancer cohorts from 4 research databases including GENIE, TCGA, SEER-Medicare, and MarketScan with respect to demographics, clinical characteristics, treatment patterns and survival

May. 2020 – Aug. 2020 **Summer intern,** Center for Observational and Real-world Evidence (CORE), Merck & Co., Pennsylvania, USA

- Team: Cardio-metabolic product line
- Manager: Swapnil Rajpathak, Gail Fernandes, Mandy Tan, Tracey Weiss
- Role: Supported 3 Merck's products by assisting in a Humana claims data analysis, an economic model building project and conducting a systematic literature review

Jun. 2019 – Jun. 2021 **Research assistant**, University of Florida, Gainesville, Florida, USA

- Principal investigator: Dr. Almut Winterstein
- Title: Scope of Long-term Uncontrolled Extension with External Comparator
- Funding source: International Society for Pharmacoepidemiology (ISPE)
- Role: 1) Conducted systematic search on use of external control with long-term uncontrolled extensions to clinical trials during 2009-2019; 2) Evaluated method adopted by long-term uncontrolled extensions based on good pharmacoepidemiology practices; 3) Developed manuscript

Jan. 2019 – Jun. 2019 **Research assistant**, University of Florida, Gainesville, Florida, USA
- Principal investigator: Dr. Joshua Brown
- Title: Long-term Healthcare Utilization among LIFE Clinical Trial Participants
- Role: 1) Performed data linkage between clinical trial and administrative claims data; 2) Analyzed 3-year Medicare claims data using SAS; 3) Developed manuscript

Jan. 2017 – Jul. 2017 **Research assistant**, National Taiwan University, Taipei, Taiwan
- Principal investigator: Dr. Fang-Ju Lin
- Title: Developing National Guidelines and Recommendations for Budget Impact Analysis (BIA) in Taiwan
- Funding source: National Health Insurance Administration (NHIA)
- Role: 1) Conducted systematic literature review on budget impact analysis guidelines to improve drug evaluation process of National Health Insurance Administration; 2) Coordinated meetings; 3) reported regularly to NHIA

Jul. 2015 – Aug. 2015 **Summer intern**, Pfizer Inc, Taipei, Taiwan
- Role: 1) Rotated in different departments including sales, marketing, and medical affairs; 2) Developed business acumen through proposing a brand plan for a Pfizer's product; 3) Collaborated with 11 summer interns from other pharmacy schools

Publication

- **Wang CY,** Brown JD. Readmissions after Pancreatic Surgery in Patients with Pancreatic Cancer: Does Hospital Variation Exist for Quality Measurement? *Visceral Medicine*. Sep, 2019.
- **Wang CY**, Kim S, Lingeneni K, Schmidt S, Diaby V, Brown JD. Predicting Cost-Effectiveness of Generic Versus Brand Dabigatran Using Pharmacometric Estimates among Patients with Atrial Fibrillation. *Clinical and Translational Science*. Feb, 2020.
- **Wang CY**, Pham PN, Thai TN, Brown JD. Updating the Cost Effectiveness of Oral Anticoagulants for Patients with Atrial Fibrillation Based on Varying Stroke and Bleed Risk Profiles. *PharmacoEconomics*. Sep, 2020
- **Wang CY**, Berlin JA, Gertz B, Davis KJ, Li J, Dreyer N, Zhou W, Seeger JD, Santanello N, Winterstein AG. Uncontrolled Extensions of Clinical Trials and the Use of External Controls – scoping opportunities and methods. *Clinical Pharmacology & Therapeutics*. 2021.
- Thai T, **Wang CY**, Chang CY, and Brown JD. Central Nervous System Effects of Oral Propranolol for Infantile Hemangioma: a Systematic Review and Meta-analysis. *Journal of Clinical Medicine*. Feb, 2019.
- Brown JD, **Wang CY**, Groessl EJ, Pahor M, Manini T. Three-year post-intervention follow-up comparison of healthcare resource utilization and costs in the Lifestyle Interventions and Independence for Elders (LIFE) Study. *The Journals of Gerontology.* April, 2020.
- Chang CY, Park H, Malone D, **Wang CY**, Wilson DL, Yeh YM, Boemmel-Wegmann SV, Lo-Ciganic WH. Immune Checkpoint Inhibitors and Immune-Related Adverse Events in Patients With Advanced Melanoma: A Systematic Review and Network Meta-analysis. *JAMA Network Open.* Mar, 2020.
- Diaby V, Alqhtani H, van Boemmel-Wegmann S, **Wang CY**, Ali AA, Balkrishnan R, Ko Y, Palacio S, de Lima Lopes G. A cost-effectiveness analysis of trastuzumab-containing treatment sequences for HER-2 positive metastatic breast cancer patients in Taiwan. *Breast*. Nov, 2019.

- Xiao H, Jiang X, Chen C, Wang W, **Wang CY**, Ali AA, Berthe A, Moussa RK, Diaby V. Using time series analysis to forecast the health-related quality of life of post-menopausal women with non-metastatic ER+ breast cancer: A tutorial and case study. *Research in Social and Administrative Pharmacy*. Nov, 2019.

PhD Dissertation & Other research experience

- **PhD Dissertation: Developing Real-World Clinical and Economic Evidence for Filgrastim and Pegfilgrastim Biosimilars (ongoing)**
  - Purpose: generate real-world evidence for filgrastim and pegfilgrastim biosimilar including (1) utilization trends, (2) comparative effectiveness, and (3) economic outcomes
  - Data sources: IBM MarketScan and Medicare fee-for-service claims databases
  - Method: (1) assessed utilization trends using Cochran–Armitage Trend test and multivariable logistic regression; (2) implemented propensity score matching and generalized estimating equation to estimate odds ratio and risk ratio; (3) developed generalized linear model to estimate adjusted costs and cost ratio
- **Use of a Rate-Based Sequence Symmetry Analysis (SSA) to assess Recurring Adverse Drug Events (ongoing)**
  - Created a cohort of TNF-α inhibitors initiators from IBM MarketScan database
  - Estimated sequence ratio for TNF-α inhibitors initiation and pneumonia using two SSA methods
  - Implemented bootstrapping to construct confidence interval
  - Developed manuscript
- **Predicting the Cost-effectiveness of Generic versus Brand Dabigatran Using Pharmacometric Estimates among Patients with Atrial Fibrillation (Published)**
  - Modified 12-state Markov model
  - Input parameters derived from IBM MarketScan database and clinical trials
  - Performed micro-simulation in a hypothetical cohort of 10,000 AF patients
  - Collaborated with researchers from pharmaceutics department
- **Updating the Cost-effectiveness of Oral Anticoagulants for Atrial Fibrillation Patients based on Varying Stroke and Bleed Risk Profiles (Published)**
  - Modified 12-state Markov model
  - Input parameters derived from IBM MarketScan database and clinical trials
  - Performed micro-simulation in a hypothetical cohort of 10,000 AF patients
- **Readmissions after Pancreatic Cancer Surgery: Can quality of care be measured between hospitals? (Published)**
  - Analyzed 3,619 discharge records in Nationwide Readmission Database using SAS
  - Utilized hierarchical modeling technique to examine the variations among hospitals
- **Central Nervous System Effects of Oral Propranolol for Infantile Hemangioma: A systematic review and meta-analysis (Published)**
  - Identified and compiled eligible studies
  - Performed the analysis using STATA to generate pooled risk ratio and forest plot

- **A Cost-effectiveness Analysis of Trastuzumab-containing Treatment Sequences for HER-2 Positive Metastatic Breast Cancer Patients in Taiwan (Published)**
  - Assisted with the cost calculation and assumption

- **Using Time Series Analysis to Forecast the Health-related Quality of Life of Post-menopausal Women with Non-metastatic ER+ Breast Cancer: A tutorial and case study (Published)**
  - Conducted a systematic review on the method of forecasting quality of life for breast cancer patients
- **Use of Immune Checkpoint Inhibitors and Risk of Immune-related Adverse Events among Patients with Advanced Melanoma: A systematic review and network meta-analysis (Published)**
  - Identified and compiled eligible studies

Honor & Awards

Sep. 2020	International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE) All Access Scholarship
May. 2019	Graduate Student Council Travel Grant (UF)
Jul. 2015	College Student Research Training Fellowship, National Science Council (Taiwan)

Certification & Extra training

Pharmacist license (Taiwan)

2019 International Society for Pharmacoeconomics and Outcomes Research (ISPOR) short course session including 1) Modeling: Design and Structure of a Model; 2) Network Meta-Analysis

2019 Causal Inference Summer Institute at Rutgers University

2020 Decision Analysis in R for Technologies in Health (DARTH) Cost-Effectiveness and Decision Modeling using R Workshop

Leadership

Aug. 2020 – Aug. 2021	President, UF ISPOR student chapter
Sep. 2019 – Aug. 2020	Vice President, UF ISPOR student chapter
Sep. 2019 – Aug. 2020	Secretary, College of Pharmacy Graduate Student Council (COPGSC)
Aug. 2017 – May. 2019	Graduate student representative

Skills

Language: English (fluent), Mandarin Chinese (native)
Software: SAS (data manipulation, statistical analysis), TreeAge (Markov model), R (ggplot and data manipulation), STATA, python